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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,544	09/26/2005	Kenichi Noda	0033-1023PUS1	1932
2292	7590	11/06/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			GREGORY, BERNARR E	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/550,544

Applicant(s)

NODA ET AL.

Examiner

Bernarr E. Gregory

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On lines 2-3 of independent claim 1, the phrase "formed by injection-molding a thermoplastic resin blended with 20-60% by volume of soft magnetic material powder" is indefinite and unclear in context in that this phrase: (1) is a method step recited in a non-method claim; (2) is recited in the preamble of the claim; and (3) is unclear as to what structure it points to.

On lines 2-3 of independent claim 1, it is unclear in context what is meant by the term "soft magnetic material powder." Please see 37 CFR §1.75(d)(1).

On line 5 of independent claim 1, it is unclear in context what is meant by the phrase "located more adjacently to."

On lines 2-3 of dependent claim 2, the phrase "a concave portion is provided around said bore to extend from the bottom face of said unit cell to the top face of said unit cell" is unclear as to what is being described geometrically.

On line 2 of dependent claim 7, it is unclear in context what is meant by the words "scale-like shape." What shape is a "scale-like shape"?

On lines 2-3 of independent claim 9, the phrase "formed by injection-molding a thermoplastic resin blended with 20-60% by volume of soft magnetic material powder" is indefinite and unclear in context in that this phrase: (1) is a

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method step recited in a non-method claim; (2) is recited in the preamble of the claim; and (3) is unclear as to what structure it points to.

On lines 2-3 of independent claim 9, it is unclear in context what is meant by the term "soft magnetic material powder." Please see 37 CFR §1.75(d)(1).

On line 4 of independent claim 9, it is unclear in context what is meant by the phrase "located more adjacently to."

On line 6 of independent claim 9, the phrase "convex and concave portions being provide at said top face" is unclear as to what is meant geometrically.

On lines 3-4 of independent claim 11, it is unclear in context what is meant by the term "soft magnetic material powder." Please see 37 CFR §1.75(d)(1).

On line 3 of independent claim 11, the use of the verb "kneading" is indefinite and unclear in context as whether the verb "kneading" is meant in terms of mixing the recited "thermoplastic resin" and the recited "soft magnetic material powder" or whether there is an omitted step of combining the recited "thermoplastic resin" and the recited "soft magnetic material powder."

Dependent claims 2-8 and 10 are unclear in that they respectively depend from unclear independent claims 1 and 9.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication JP-2001-237591-A (Kayama et al).

As indicated on the International Search Report for PCT/JP2004/005432 as performed at the Japanese Patent Office on 13 July 2004, independent claim 11 is anticipated by Japanese Patent Publication JP-2001-237591-A (Kayama et al), with particular attention being directed to sections [0013] through [0015], [0020], and [0028] of the Specification of Japanese Patent Publication JP-2001-237591-A (Kayama et al). In addition, particular attention is directed by the International Search Report to drawing Figure 4 of Japanese Patent Publication JP-2001-237591-A (Kayama et al).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesch (U.S. Patent 3,315,259-A) in view of the MatWeb reference and the Cotell et al reference (Naval Research Lab).

The one of ordinary skill-in-the-art of radar absorbers would be a person holding a graduate degree in Physics, Chemistry, or Electrical Engineering with several years of practical experience in designing and/or testing radar absorbing materials.

Independent claim 1 differs from the invention disclosed in Wesch (U.S. Patent 3,315,259-A) in that Wesch (U.S. Patent 3,315,259-A) never specifically recites the use of a "thermoplastic resin," as recited in independent claim 1 at line 2. At column 3, lines 25-52 of Wesch (U.S. Patent 3,315,259-A), the "dielectric binder" (col. 3, line 25) is discussed, giving examples and later generally teaching that, "the only requirement being that the binder material have a relative dielectric constant between 1.5 and 10 and a dielectric loss tangent smaller than 0.1" (col. 3, lines 33-36). Using this teaching of Wesch (U.S. Patent 3,315,259-A), looking to the Cotell et al reference (Naval Research Lab) reference, it is seen that resins are available that have a dielectric constant of less than 4.5, where Wesch (U.S. Patent 3,315,259-A) is his teaching cited above gives a range of 1.5 to 10 for the dielectric constant of the binder. More particularly, the cited MatWeb reference shows a particular Thermoplastic Resin (namely, Kolon Kopa), as claimed in claim 1 at line 2, with a dielectric constant of 3.4, which is plainly within the range of 1.5 to 10 as taught in Wesch (U.S. Patent 3,315,259-A). It would have been obvious to one of ordinary skill-in-the-art from the general teaching of Wesch (U.S. Patent 3,315,259-A) at column 3, lines 33-36 and from the data in the MatWeb reference and from the data in the Cotell et al reference (Naval

Research Lab) reference that the “dielectric binder” in Cotell et al reference (Naval Research Lab) reference could be a resin generally and more particularly the old and well-known “thermoplastic resin” (line 2 of claim 1), such as that shown in the MatWeb reference in that the dielectric constant for resins generally and thermoplastic resins in particular fall within the range of dielectric constants taught by Wesch (U.S. Patent 3,315,259-A) at column 3, lines 33-36 of the reference.

The “soft magnetic material powder” (lines 2-3 of claim 1) is met by the “ferrites” recited at line 49 of column 3 of Wesch (U.S. Patent 3,315,259-A) in the context of the discussion of the “fillers” at column 3, lines 37-52 of Wesch (U.S. Patent 3,315,259-A), where the “fillers” are called “iron powders” at lines 40-41 of column 3 of Wesch (U.S. Patent 3,315,259-A).

With respect to the claim 1 limitation (lines 2-3) that there be 20-60% of “soft magnetic material powder” in the claimed “composite” (line 1 of claim 1), please see column 4, lines 4-6 of Wesch (U.S. Patent 3,315,259-A). The proportion of “2.5% to 90% by weight” recited at column 4, lines 4-6 of Wesch (U.S. Patent 3,315,259-A) would easily meet the recited proportion of 20-60% by volume as recited at lines 2-3 of claim 1.

With respect to the further limitations set forth in each of dependent claims 5 and 6, neither of these resins is recited in Wesch (U.S. Patent 3,315,259-A), but it is believed that Wesch (U.S. Patent 3,315,259-A) as modified above meets the further limitations of dependent claims 5 and 6 in that each of the named

resins falls within the dielectric constant range taught by Wesch (U.S. Patent 3,315,259-A) for the "dielectric binder" at column 3, lines 33-36 of Wesch (U.S. Patent 3,315,259-A).

The dependent claim 8 recitation of a range of particle sizes in the recited "soft magnetic material powder" of "5-50 μm " (line 3 of claim 8) is fully met by the disclosed particle size range of "0.1 to 100 μ " at column 3, line 39 of Wesch (U.S. Patent 3,315,259-A).

7. Due to the lack of clarity of claims 1-11, it is not possible at this time to indicate allowable subject matter.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The examiner-cited prior art herewith is of general interest for showing similar compositions or geometries to that in the invention in the instant application.

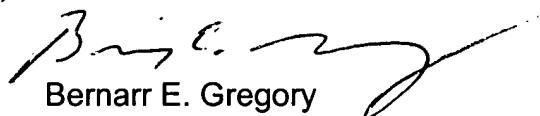
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernarr E. Gregory whose telephone number is (571) 272-6972. The examiner can normally be reached on weekdays from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza, can be reached on (571) 272-6979. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bernarr E. Gregory
Primary Examiner
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